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NEW FRESHWATER GASTROPOD MOLLUSKS OF THE AFRICAN GENUS *LANISTES*

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The two new species and one subspecies described herein form part of the collection of the Museum of Comparative Zoology at Harvard College. I am deeply indebted to Dr. J. C. Bequaert and Dr. W. J. Clench for the opportunity to examine and describe them.

LANISTES (*LANISTES*) *KOBELTI*, new species

Figures 3-4

1913. *Lanistes* sp.? Kobelt, Mon. Amp. in Martini and Chemnitz, Syst. Conch. Cab., 1, Abt. 20, Neue Folge, pl. 30, figs. 4-4a.

Shell sinistral, fairly thin. Whorls strongly shouldered below the suture, with a very slight ridge. Spire produced, apex much corroded. Aperture ovate; parietal lip simple and only thinly calloused; columella thin, not reflected. Umbilicus very wide and deep, limited behind by a very prominent, angular, thickened ridge, which forms a slight angle at the base of the moderately concave columella. Growth-lines irregular, interspaced with fine axial striae, and cut by very fine, irregular, close-set spiral engraved lines in the holotype (very superficial in the paratype). Color pale yellowish-brown, with numerous irregularly spaced reddish-brown bands; interior of aperture pale bluish-white banded with reddish-brown. Operculum corneous, of the usual shape.

Measurements (in millimeters)

	Length	Width	Aperture		
			Length	Width	
Holotype	23	24	15	11	Fig. 3
Paratype	23	23	15	11	Fig. 4
"	18	23	15	10	

Locality. "Africa" (probably West Africa); holotype M.C.Z. No. 173419; paratypes M.C.Z. No. 173420 and in T. Pain Coll.

This unusual little species was apparently figured by Kobelt (1913, pl. 30), but he did not name it or mention it in the text. The umbilical keel is very prominent, more so than in *L. (L.) conigicus* Boettger. The spire is also higher and the suture less flattened than in that species. *L. (L.) kobelti* is, as the above table shows, very constant in size and subject to but little variation in this respect.

LANISTES (MELADOMUS) CONNOLLYI, new species

Figures 1-2

Shell sinistral, perforate, fairly solid. Color dark reddish-brown, without external bands. Whorls noticeably flattened and obtusely shouldered above, rounded below, with a blunt angulation around the umbilicus which is deep and moderately wide. Apex entirely corroded, remaining whorls 3. Surface somewhat malleated, with fine and regular growth-lines; spiral sculpture obsolete. Aperture ovate vertical; lip simple, thin, edged with pale blue. Columella thin, evenly curved, not angular at the base. Parietal lip bluish-white and only thinly calloused. Color dark reddish-brown, without external bands; interior of the aperture marked with faint reddish-brown lines. Operculum unknown.

	Measurements (in millimeters)				
	Length	Width	Aperture		
			Length	Width	
Holotype	40	36	31	22	Fig. 2
Paratype	45	40	32.5	26	Fig. 1
“	43	39	30.5	24.5	
“	55	50	38.5	30	
“	45	44	33	27.5	

Localities. Southern Rhodesia: Victoria Falls, holotype *ex* Connolly Coll., M.C.Z. No. 173421, and paratypes, M.C.Z. Nos. 173422 and 179845; also at Congo Museum, Tervuren, and in T. Pain Coll. Northern Rhodesia: River Kafue at N'kana, near the Congo border, paratype, collected by C. von Hirschberg, M.C.Z. No. 173423.

Additional specimens of this species, referred to *Lanistes ellipticus* von Martens by the late Major Connolly, are from the mouth of the Chobe River, Southern Rhodesia (Holub) and from the Kafue River, Mumbwa District, Northern Rhodesia (Pitman). (See Connolly, M.,

1938, Ann. South African Mus., 33, p. 556.)

L. connollyi is easily confused with *L. ellipticus* v. Martens, which occurs in the same general territory. It differs in its less upright elliptical form, decidedly shouldered whorls more or less flattened below the sutures, the deeper and wider umbilicus and the pronounced blunt angulation around the umbilicus.

LANISTES (MELADOMUS) OVUM MWERUENSIS, new subspecies
Figures 5-7

Shell small, fairly thick. Color uniform greenish-brown, without trace of bands. The spire is much corroded; remaining whorls 3, rapidly increasing, the last considerably inflated. Sutures impressed, but little flattened. Umbilicus narrow but deep. Surface with fairly prominent growth lines, interspaced with fine wavy striae, especially on the body-whorl. Aperture ovate, lip simple, interior pale blue. Columella thin, curved, joined by a moderately thick callus of bluish-white color. Operculum as in typical *L. (M.) ovum*.

Measurements (in millimeters)

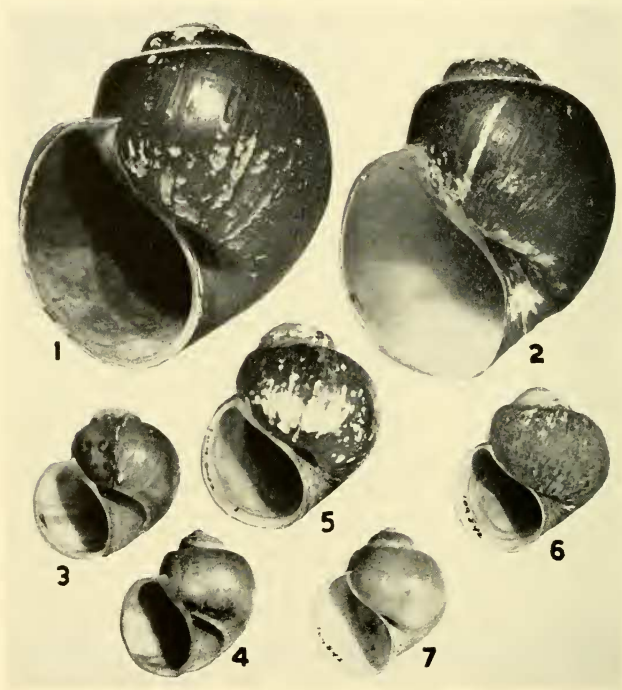
	Length	Width	Aperture		
			Length	Width	
Holotype	30	30	19.5	16	Fig. 5
Paratype	30	32	21	15	Fig. 6
"	26	25	19	13.5	Fig. 7

Localities. Belgian Congo: Lake Mweru (or Moero) at Kilwa, holotype, collected by Dr. L. van den Berghe, M.C.Z. No. 109842, and paratypes, M.C.Z. No. 185683; also at Congo Museum, Tervuren and in T. Pain Coll.; Lake Mweru at Katenge near Kilwa, paratypes, M.C.Z. No. 152483 (received from Dr. M. Wanson); Lake Mweru at Pweto, paratypes, M.C.Z. No. 152346 (received from Dr. M. Wanson); Lake Mweru at Moba (Chamfubu River) near Pweto, M.C.Z. No. 185682 (received from Dr. M. Wanson).

Only the holotype (Fig. 5) and one of the paratypes (Fig. 6), both from Kilwa, appear to be full-grown. The paratype in Figure 7, also from Kilwa, is immature. Most of the other paratypes are even younger, the smallest being only 9 mm. in length.

Apparently a dwarf race of *L. (M.) ovum* Peters, possibly confined to Lake Mweru. When adult it resembles the much larger *L. (M.) ovum procerus* v. Martens, but has always a much thicker and more solid shell. Immature shells are always of a uniform olive-green color

often with traces of malleation on the body-whorl. So far as known, *Lanistes orum* is the only species of the genus recorded from Lake Mweru, where it is said to live in the swamps near the coast.



Figs. 1-2, *Lanistes (Meladomus) connollyi*, new species: 1, paratype, N'kana; 2, holotype, Victoria Falls. Figs. 3-4, *Lanistes (Lanistes) kobelti*, new species, Africa: 3, holotype; 4, paratype. Figs. 5-7, *Lanistes (Meladomus) ovum mweruensis*, new subspecies, Kilwa: 5, holotype; 6 and 7, paratypes. All figures slightly over natural size.